

REMARKS

Claims 74-76 are pending in the present application. In the Office Action dated September 30, 2003, the Examiner rejected claims 74-76 under 35 U.S.C. § 103(a) as unpatentable over U.S. Patent No. 6,179,689 B1 to Ohno, *et al.* ("Ohno"). Applicant disagrees with these grounds of rejection and wishes to clarify various distinctions of the embodiments of the applicants' disclosed invention over the cited art. Reconsideration is therefore requested in light of the present amendment and following remarks.

The disclosed embodiments will now be discussed in comparison to the prior art. It is understood, however, that the following discussion of the disclosed embodiments, as well as the discussion of the differences between the disclosed embodiments and the prior art subject matter do not define the scope or interpretation of any of the claims. Instead, such discussed differences are offered merely to help the Examiner appreciate important claim distinctions as they are discussed.

The present invention generally relates to an apparatus to planarize a microelectronic substrate. As described by embodiments of the present invention, the apparatus generally includes a platen having a support surface that is oriented at a non-horizontal angle, a non-continuous polishing pad adjacent to the support surface of the platen with a planarizing surface that is also oriented at a non-horizontal angle, and a carrier located proximate to the planarizing surface for biasing the microelectronic substrate against the polishing pad. The polishing pad can be an elongated web-format type polishing pad that extends from a supply roll to a take-up roll, or alternatively, the polishing pad can be a circular planform polishing pad that is used with a corresponding circular platen. In either case, the platen can be oriented vertically or at other non-horizontal angles to promote the flow of planarizing fluid and suspended particulate material from the polishing pad. Removal of spent planarizing fluid and suspended particulate in this manner is particularly advantageous since it minimizes the possibility of surface scratching of the semiconductor substrate.

An additional advantageous aspect of an inclined platen and polishing pad is that the apparatus can have a smaller planform outline, or "footprint", so that the apparatus occupies generally less floor space when compared to conventional planarizing machines. This aspect thus allows a greater number of machines to be positioned within a given floor area.

The Examiner has cited the Ohno reference. Ohno discloses an apparatus for forming a spherical mirror surface. Referring to Figure 6 of the Ohno reference, the apparatus

includes a supply roller 11 and a spaced apart take up roller 12. The supply roller 11 and the take up roller 12 cooperatively retain an abrasive tape 2 on the apparatus. The abrasive tape 2 does not include a linear member that extends between the supply roller 11 and the take-up roller 12. Instead, Ohno discloses a generally C-shaped support member that retains the rollers 11 and 12 in a spaced-apart relationship across a stage 3 that has a concave curvature in order to form a spherical surface on a workpiece 1.

Turning now to the claims, differences between the claim language and the applied art will be specifically pointed out. Claim 74, as amended, recites in pertinent part: "A method for installing an elongated planarizing medium on a planarizing machine, comprising...installing a supply roll on a supply spindle of the planarizing machine while the elongated planarizing medium is attached to both the supply roll and a take-up roll...installing the take-up roll on a take-up spindle of the planarizing machine while the elongated planarizing medium is attached to both the supply roll and the take-up roll... and... positioning *a cartridge frame between the supply roll and the take-up roll, wherein the cartridge frame includes a linear member that extends between the supply roll and the take-up roll.*" (Emphasis added). The Ohno reference simply does not disclose this. Claim 74 is therefore allowable over the cited art. Claims depending from amended claim 74 are also allowable based upon the allowability of the base claim and further in view of the additional limitations present in the dependent claims.

Claims 77-79 are new. No new matter has been added.

All of the claims remaining in the application are now clearly allowable. Favorable consideration and a timely Notice of Allowance are earnestly solicited.

Respectfully submitted,
DORSEY & WHITNEY LLP



Steven H. Arterberry
Registration No. 46,314
Telephone No. (206) 903-8787

SHA:tlm

Enclosures:

Postcard

Fee Transmittal Sheet (+ copy)

DORSEY & WHITNEY LLP
1420 Fifth Avenue, Suite 3400
Seattle, WA 98101-4010
(206) 903-8820 (fax)

h:\ip\documents\clients\micron technology\100\500199.04\500199.04 amend oa 093003.doc